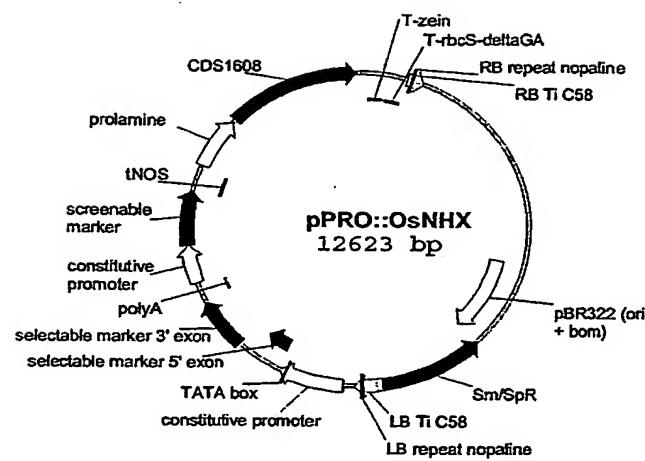
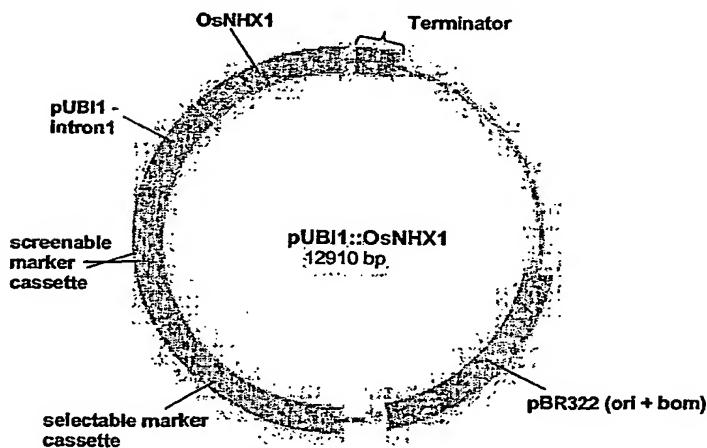


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**FIGURE 1****FIGURE 2**

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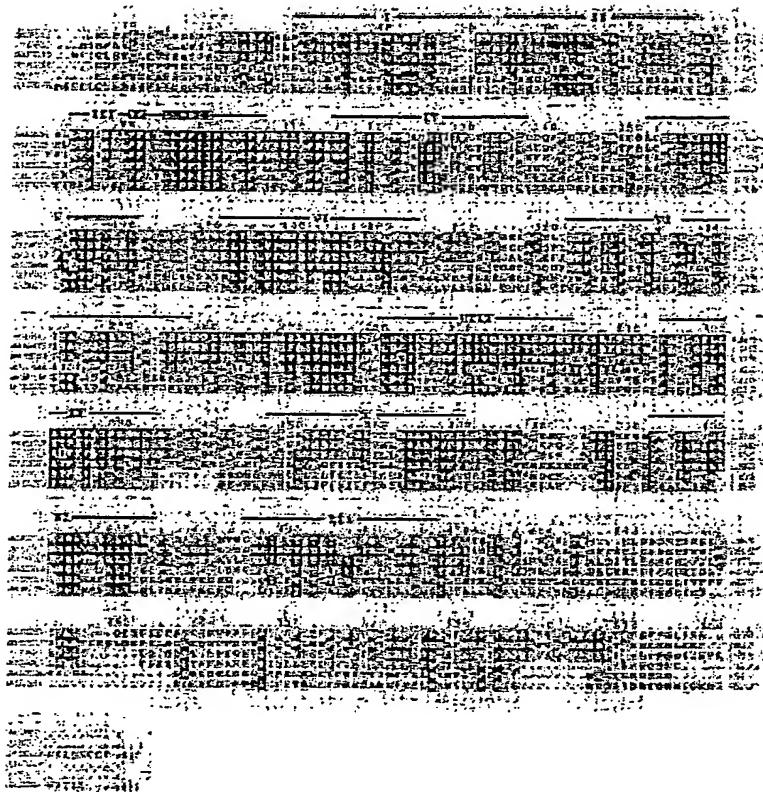


FIGURE 3

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SEQ ID NO 1: coding sequence for *Oryza sativa* NHX1 protein

GAGAAGAGAGTTTGAGCGAGCTCGCGCGAATGCGAAGCCAACCGAGAGAGGTCTCGA
 TACCAAATCCCGATTCTCAACCTGAATCCCCCCCCACGTTCTCGTTCAATCTGTT
 CGTCTCGGAATCGAATTCTTGTTTTTCTCTAATTTCACGGGAATTGTCGAATT
 AGGCATTCAACCAACGAGCAAGAGGGACTGGATTGGTTGGTTAAAGCTCCGCATCTG
 GGCGGAAATCTCGCTCTTCTCTGCGGTGGGGAGAGTCGCCGCCGGTGGAGG
 CATGGGGATGGAGGTGGCGGGCGCGGGCTGGTACACGACCTCCGACTAAG
 CGTGGGTGGTCCATCAACCTTGTGCGCTGCGCATCGTCCCTCGC
 CACCTCCCTCGAGGAAATCGTGGTCAATGAGTCCATCAGCGCTCATCGGGCT
 CTGCACCCGGCGTGGTATCTGCTGATGACCAAAGGAAAGAGCTCCACTTATTGCT
 TCAGTGAGGATCTTCTCATCTACCTCCCTCCGATCATCTTCAATGCAGGTTT
 CAGGAAAGAAAAAGCAATTCCGGAAATTCAATGACGATCACATTATTGGAGCCGT
 CGGGAAATGATATCTTCTCAAAATATCTATTGCTGCCATTGCAATATTCAAGCAGAA
 TGAACATTGGAACGCTGGATGTAGGAGATTTCCTGCAATTGGAGCCATCTTTCTGCG
 ACAGATTCTGTCGCACATTGCAAGGCTCTCAATCAGGATGAGACACCCCTTTGACAG
 TCTGGTATTGCGTGAAGGTGTGTAACGATGTCATCAATTGTCCTTCAACGGAC
 TACAGAACTTGAATCTTGCACATAGATGCCGTGCTTCGAAATTCTGGGGAAC
 TTCTTATTATTATTGTCAGCACCTTCCTGGAGATTGCTGGATTGCTCAGTGC
 ATACATAATCAAGAAGCTATACATTGGAAGGCATTCTACTGACCGTGGGCTTC
 TGATGCTCATGGCTTACCTTTCATATATGCTGGCTGAGTTGCTAGATTGAGCGGCAATT
 CTCACCGTATTCTCTGCTGTTGTAATGTCACATTGCAACTCTGCTTCATGCTGAGACATT
 GAGTCAGAGTTACAACAAAGCACGCAATTGCAACTCTGCTTCATGCTGAGACATT
 TTCTCTCTGTTGATGTTGGGATGGATGCAATTGGATATTGAAAATTGGGAGTTTCCAGT
 GACAGACCTGGAAATCCATTGGGATAAGCTCAATTGCTGAGGATTGGTTCTGATTTG
 AAGAGCTGCTTTGTATTCCCGTGTGCTTGTGCAACCTAACAAAGAAGGCACCGA
 ATGAAAAAAATAACCTGGAGACAGCAAGTTGTAATATGGGGCTGGGCTGATGAGAGGA
 GCTGTGCGATTGCTCTGCTTACAATAAGTTACAAGATCTGGCATAACTCAGCTGCA
 CGGCAATGCAATAATGATCACCGCACCATCACTGCTTCTTTCAGGACTATGGTAT
 TTGGGATGATGACAAAGCATTGATCAGGCTGCTGCTACCGGCTCAGGCCATCTGTC
 ACCTCTGAGCCTTCATCACCAAAAGTCCCTGATTCTCTCTCTGACAAGCATGCAAGG
 TTCTGACCTCGAGAGTACRACCAACATTGAGGCTTCCAGCCTCCGGATGCTCCCTCA
 CCAACCGACCCACACTGCAACTACTGGCGCAAGTTGACGACGCGCTGATGCGA
 CCGATGTTGGCGGGCGGGTGTGTCGCTTCTCCCTGGATCACCAACCGAGCAGAG
 CCATGGAGGAAGATGACAGTGCACAGAACATGAGAATGGAATGGTGTGAGGAGAATA
 CATGTAATGTCAGGAGACCAAAAGAGAGAACCCAAAGTTGGGTTTGAGAGTTGGCTG
 CTGCTTAATGAGTTGATAGTGCCTATATTCTCAGAACATTCAAGATGGTGCCTCACCA
 AGGCTTAAGAGCCAGGAGGACCTTCTGATAATTGGTTGGGATGATTGGTTGTTCTGTC
 AGGATGAACCCCTAGTGAGTGACACAGGGTGTGCTCCGACAACCTGTAATTGTA
 GATTAACAGCCCCATTGTACCTGTCACCATCTTGTGCTGGCGGGTGTCTTCTAG
 TTGCCCCCTGTCATGTAAGGAAATTCTCCGCCAAAATAGATTGCTGATATAATAAT
 TTGCTTGGTTG

FIGURE 4

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SEQ ID NO 2: *Oryza sativa* NHX1 protein

MGMEVAAARLGALYTTSDYASVVSINLFVALLCACIVLGHLLLEENRWVNESITALIIGL
 CTGVVILLMTKGKSHLFVFSEDLFFIYLLPPIIFNAGFQVKKKQFFRNFMITLFGAV
 GTMISFFTISIAALIAIFSRMNIGTLDVGDFLAIGAIFSATDSVCTLQVILQDTPFLYS
 LVFGEGVVNDATSIVLFNALQNFDLVHDAAVVLKFLGNFYFLFLSSTFLGVFAGLSSA
 YIIKKLYIGRHSTDREVALMMLMAYLSYMLAEELLDLSGILTVFFCGIVMSHYTWHNVTE
 SSRVTTKHAFAATLSFIAETFLFLYVGMDALDIKEKWEFASDRPGKSIGISSILLGLVLI
 RAAFVFFPLSFLSNTKKAPEKIIWRQQVVIWWAGLMRGAWSLALAYNKFRSGHTQLH
 GNAIMITSTTVVLFSTMVFGMTKPLIRLLPASGHPTSEPSSPKSLSHSPLLTSMQG
 SDLESTTNIVRPSSLRMLLTKPHTVHYYWRKFDDALMRPMFGRGFVFSPGSPTEQS
 HGR

SEQ ID NO 3: *Arabidopsis thaliana* Nhxl

ATGTTGGATTCTCTAGTGTGCAAACCTGCCTTCGTTATCGACATCTGATCACGCTTCTGT
 GGTTGCGTTGAATCTCTTTGTTGCACTTCTTGTGCTTGATTTGTTCTTGGTCATCTT
 TGGAAAGAGAATAGATGGATGAACGAATCCATCACCGCCTTGTGATTTGGCTAGGCACT
 GGTGTTACCATTTGTTGATTAGAAAGGAAAAGCTGCACATCTCTCGTCTTGTGA
 AGATCTTCTCTCATATATCTTGCACCCATTATATTCAATGCAGGGTTCAAGTAA
 AAAAGAAGCAGTTTCCGCAATTCTGTGACTTATATGCTTTGGTGTGTTGGGACT
 ATTATTCCTGACAATCATATCTCTAGGTGTAACACAGTTCTTAAAGAAGTTGGACAT
 TGGACCTTCTGACTGGGATTTATCTGCTATTGTCGACATATTGCTGCAACAGATT
 CAGTATGTACACTGCAGGTTCTGAAATCAAGACAGACACCTTCTGCTTACAGTCTGTAA
 TTGGAGAGGGTGTGAAATGATGCAACGTCAGTTGTTCTCAACGCGATTCAAGAG
 CTTTGATCTCACTCACCTAACCAACGAAGCTGCTTTCATCTCTGGAAACTCTCTG
 ATTTGTTCTCTCAAGTACCTTGTGCTGGTGTGCAACCGGTCTGATAAGTGGTATGTT
 ATCAAGAAGCTATACTTGTGAAAGCACTCAACTGACCGAGAGGTGCCCCCTATGATGCT
 TATGGCGTATCTTCTTATGCTGAGCTTCTGACTTGTGCTGAGCTTACCTCTG
 TGTTTTCTGTGGTATTGATGTCCTCCATTACACATGGCACAATGCTAACGGAGAGCTCA
 AGAATAACAACAAAGCATACTTGTCAACTTGTCTTTCTGCGGAGACATTATTT
 CTITGATGTTGGAAATGGATGCCCCTGGACATTGACAAGTGGAGATCCGTGAGTGACACAC
 CGGGAAACATCGATCGCAGTGAGCTCAACTCTTAATGGGTCTGGTCATGGTGGAAAGAGCA
 GCGTTCTGCTTTCCGTTATGTTCTATCTAACTTGTGAGCTTACGGAGAATCAAAGCGAGAA
 AATCAACTTAAACATGCAGGTTGTGATTGGTGGTCTGGTCTCATGAGAGGTGCTGTAT
 CTATGGCTCTTGCAACAAAGTTACAAGGCGGGCACACAGATGTACGCGGGAAAT
 GCAATCATGATCAGGATCAGGATAACTGTCCTCTTTAGCAACAGTGGTGTGGTAT
 GCTGACCAACACTCATAAGCTACCTTACCTAATGGGACCCACGAGCATGT
 TATGATGACAACACCCCCAAATCCATACATATCCCCTTGTGACCAAGACTCGTC
 ATTGAGCCTTCAGGAACCACAAATGTGCCTCGGCTGACAGTATACGTGGCTTCTGAC
 ACGGCCACTCGAACCGTGCAATTACTACTGGAGACAATTGATGACTCCTCATGCGAC
 CCGCTTTGGAGGTGCGCTTGTACCCCTTGTCCAGGTTCCAACGTGAGAGAAC
 CCTCCTGATCTTAGTAAGGCT

FIGURE 4 (continued)

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SEQ ID NO 4: *Arabidopsis thaliana* Nhxl protein

MLDSILVKLPLSLSSTSDDHASVVALNLVALLCACIVLGHLEENRWMNESITALLIGLT
 GVTILLISKGKSHLLVPSEDLFFIYLPPPIIFNAGFOVKKOFFRRNFTVIMLFGAVGT
 IISCTIISLGVTQFPKLDIGTPDLGDYLAIQFAAIDSVTQLVNLQDETPLLISLV
 PGEVGVNDATSVVVFNAIQSFDLTHLNHEAFHLLGNFLYLFLLSTLLGAATGLISAYV
 IKKLYFGRHSTDREVALMMIIMAYLSYMLAELFDLSGILTVFFCGIVMSHYTWHNVTTESS
 RITKHTHTFATLSFLAETFLFLYVGMDALDIDKWRSVSDTPGTSIAVSSILMGLVMVGR
 AFVFPLSFLSNLAKKNQSEKINFNMQVVIWWSGLMRAVSMALAYNKFRAGHTDVRGN
 AIMITSTITVCLFSTVVFGLITKPLISYLLPHQNATTSMISDDNTPKSIRIPIPLLDQDSF
 IEPSGNHNVPVRPDSIRGFLTRPRTVHYYWRQFDDSFMRPVFGGRGFVFPVPGSPERN
 PPDLASKA

SEQ ID NO 5: *Medicago sativa* Na⁺/H⁺ antiporter

ACCGGGGGAAATCCAACCCATTGTATAACAACAACCTACCGGAGATATATAATATCTCT
 CCTCTAAATAGAATATCGACAGAGTGACTCAACAAGATTATTAGGAGTGATAATCTCC
 ACGGCAGCTCAAACAAACACATCCGATTATCATCATCAGCGTTGCTCGAGAGATACT
 TGTGTGATGAGATCAGAAGGTCTTAAATGGACAGTCAGAAACATAATATCTGGG
 ATTCAATTAACTACTGGACTTTGAAATTTCAGAAATTCACTCAATTCTCAATTGGTTC
 TAAATCTGCTTTGAAATTGGAGGGTGAGCATCATGGCTATTGAAATGTCTT
 CTATTGTTTCAAACATATCAATGTTATCCACTTCCGATCATGCTTCTGTTGTTCTATG
 AACCTGTTGTCGGACTCTGTGCTGTTGATTGTCCTTGTCTCGAGGAGAA
 TCGATGGATGAATGAAATCCATCACTGGCCCTTGTGGTATTGGACTCTGGTGTAGTGA
 TTTGCTTTAGTGTGGAAAAAGTTCGACATTCCTGTTCACTGAAGATCTTTC
 TTTATATACCTCTGCCGCTATTATATTCAATGCCGTTCAACTAAAGAAAAGCA
 GTTTTTGTCAACTCATGACTATCACATCATTGGAGCTATTGGCACATTAAATATCTT
 GTGTCAATTATAACACACGGCTACTTTGCTTTAAAGGAGATGGATATTGGGCACTG
 GAAATGGCGGATTATCTAGCTATTGGAGCAATTGGCCAAACAGACTCTGTTGCA
 ATTGCAAGGTGCTAAATCAGGATGAGACACCTTATGATGTTGTTGGGAAAG
 GTGTTGTAATGATGCTACCTCAGTGGTCTTCAATGCAATTCAAAGCTTGTCTT
 AACCAACTGAACCCCTCAATTGCAATTGCAATTCTGGCAACTTCTGTATTGTTGTT
 AGCAAGCACACTCTGGCTGGCTGACAGGCTGCTCAGTGCCTATGTTATTAAAAGC
 TGTACATTGGCAGGCACCTTGGCTTAAGGAGATGGTCTTATGATGCTAAATGGCATA
 CTCTCCTATATGCTGGCTGAGTTACCTATCTGACTGGCATTCTTACCGTATTCTT
 TGGTATTGTTATGTCATTATACTGGCATAATGTGACGGCAGAGTTCAAGAATCACTA
 CCAAGCATTCTTGGCTACCTTGTCTTGTGAGATCTTATCTTCTTTATGTT
 GGTATGGATGCCCTGATTGAAAATGGAAGTTGTTAGTGTAGTCTGGAAACATC
 TATAGCTGAAGTTCAGTATTGTTGGCTTAACTCTTGGAGAGGAGCGTTGTT
 TTCCCTTATCTTCTTATCCAACCTGACTAAAATCACACATCAGAAGATTCCTTC
 AGACAGCAAGTTATCATTTGGGGCTGGTCTTATGAGAGGTGCTTCAATGGCACT
 TGGTATAATGAGTTCACCATGTCGGGGCAACTCAACTACGTAATGCAATCATGA
 TAACCAGCACCCTCACTGTTGCTTTCAGCACAGTGGTGTGGTTGCTGACTAAG
 CCACTCATAAGGCTCTACTACCTCATCCTAAATCACAAGCAGCATGACAACACAGA
 ATCGACTACTCCAAAATCAATTGTCACCTCTAGGAGATCCCGAGATTCTGAAG
 CTGATCTGAAGGCCATGAAATTACCGACCGAACAGCCTCGTGTCTTACTATCAACT

FIGURE 4 (continued)

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CCAACTCACACTGTCATCGATTATGGCGAAAGTTGATGATTCAATTGCGTCCTGT
 TTTGGTGGCAGAGGTTTGTTCCTGTAGAACCTGGCTACCAAGTGAAACGCAATGGTA
 ATCAATGGGGTTGAGAAAAGAGCCATGAAATGTGTAAATGTGTTGTATACGTAT
 GATTGTGAAACTCATGCAACGCTGTATAATGTATTATGTCATAAGAACCTAGTAG
 TGAAATTTCTTAAAAAAACCTCGTAGTGAAATTGTTGAGCTGTTGAGTAGC
 TAGTATGAGATGGCTGCCATCTCTGTCTATTATGTAAACTACAATATTTTAGAT
 TCTCTGAGCCATTACATGTTGTGTATGTGCCAAAAAAAAAA

SEQ ID NO 6: *Medicago sativa* Na+/H+ antiporter protein

MAIEMSSIVSKLSMLSTSVDHASVSMNLFVALLCACIVLGHLLNEENRWMNESITALLIG
 IGTGVVILLFSGGKSSHILVFSDELFFIYLLPPIIFNAGFQVKKKQFFVNFMITSFGA
 IGTLISCVIITGTATPFAFKRMDIGPLEIDGYLAIGAIFAATDSVCTLQVLNQDETPLLY
 SLVFGEGVVNDATSVVLFNAIQSFIDLNQLNPSIALHFLGNFLYFLVASTLLGVVTGLLS
 AYVIKVKLYIGRHSTDREVALMMIIMAYLSYMLAEELTSLGILTVFFCGIVMSHYTWHNVT
 QSSRITTKHSPATLSFVAEIFIPLVYGM DALDIEKWKPVSDSPGTSIAASSVLLGLILL
 GRAAFVFPLSFLSNTKKSQHQKISFRQQVIIWWAGLMRGA VSMALAYNQFTMSGHTQL
 RSNAIMITSTITVVLFSTVVFGLLTKPLIRLLLPHPKITS SMTTTESTTPKSFIVPLL
 DSRDSEADLEGHEIHRPNSLRALLSTPTHTVHRLWRKFDDSFMRPVFGGRGFVPVEPGS
 PSERNGNQWG

SEQ ID NO 7: *Suaeda maritima* subsp. *salsa* Na+/H+ antiporter

TTTCACAAAGATTATGGACTTCAGAACGTTGATTTGTGGAGCTAGAAAGGGTTTCAC
 ATACATTGGACATTAAATTACTGAATATATATATATTGTTGTTGGCTCTGGATTCCG
 GTGCACAAAGAAATAGGTGAAACATGTTGTCACATTGAGCTTTTGCAAGTAAG
 ATGGACATGGTTTCGACGTCGATCATGCTCCGTTGCGATGAATTGTTGTGGC
 ACTGTTACCTGGTCGATGTAATTGGTCATCTTCGAAAGAGAAATCGCTGGATGAATG
 AATCCATTACAGCTTGTCTATTAGTTTATCTACTGGGATTATAATCTGCTAAATTAGT
 GGAGAAAAGACTCGCAATTGTTGGCTCTCAGTGAAAGATCTTCTTATATACTCCT
 TCCACCGATTATATTCAATGCGGGGTTTCAGGTGAAAAGAGCAATTTCGCAACT
 TCATTACTATTATTGTTGGAGCCGTTGCAATTGGTATCATTCATAATCATATCT
 CTTGGTCAATAGCTATATTCAAAAGATGGGATATTGGTCTGGAGTTAGGGGATCT
 TCTTGCAATTGGTCAATATTGCGCAACTGATTGCAATTGCAAGTGCTTA
 ATCAAGATGAGACTCCACTTCCTTATAGTCCTGTTGGTGAACGTGTCGTCAATGAT
 GCTACATCAGTGGTGTGTCATGCAATTCAAACCTTGCACCTCACGCACATTGACCA
 CAGAATTGCCCTCAATTGGTGGCAACTTTCTATATTTTGTCAAGCAGCTCTGC
 TTGGGAGCAGTGACTGGCTTGCTAAGCGCTTATGTCATCAAAAGTTGTACTTTGGAAAGG
 CATTCAACTGACCGTGAGGTAGCTTAATGATGCTTATGGCTTATCTATCGTAATGCT
 TGCTGAACTCTCTATCTGAGCGGAATTCTACAGTATTCTCTGTGGGATTGTATGT
 CCCATTATAACATGGCACATGTGACGGAGAGCTCCAGAGTAACCCACCAAGCATGCTTT
 GCAACACTCTCTTGTAGCTGAGATCTCATCTTCTATATGTTGGTATGGATGCACT
 GGATATTGAGAAGTGGAGATTGAGCTGAGCGATAGTCCCTGGAAACATCTGTTGCTGTGAGTT
 CCATACTCTGGTCTTACATGTTGGCGAGCTGCTTGTGTTTCCCTCGCTTT

FIGURE 4 (continued)

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TTAATGAACTTGTCCAAGAAATCAAATAGTGAGAACGGTCACTTCAATCAGCAGATAGT
CATTTGGTGGGCTGGTCTCATGAAAAGTGCTGTCCTCGGCACTTGCTTATAATCAGT
TTCAAGGGTCAAGGACACACACAGCTGAGGGGAAATGCAATCATGGTACAAACGACCACTA
ACCGTGTCTCTTCACTGATGGTATTGGGTGCTGACAAGGCCTTATACTCTT
TATGTTGCCTCAACCGAACATTCTACTAGTGCAACGACCCGTGTCAGATTGGGAGTC
CAAAGTCATTCTCCTTGCCCTTCTGAAGAGATAGACAAGATTCTGAAGCTGATTGGGC
AACGATGTGAAAGAACCTACCCCCGGTGGGACTATAGCTCGACCTACTAGTCCTCGTAT
GCTACTAAATGCAACCAACTCAGTCCATCATATTGGCGCAGATTGCTGATGATTATT
TCATGGGGCTGTATTGGTGGCGGGGTTTTGTCATCTTGTCCCAGGTCAACCCACC
AACAGAGCATCACTAATTGTACAGAGAACATAAGTTAGGGATAATTGAGGCAGTT
GGTGCAGAAACTAATAACTTACAGCCTACAGGAATCTACAAAGACAAAAAAATGCCCT
TACCCAGAAACGAAACGCCGGTGTGGTCTCGTGGGCTTGATGTTAAAGACTGTGCTG
TACITCTGGTAAATAGAGACTAAGTTACAGAAAACCCAGTTAAACATATCTGAAATT
TTTACAGCATGGATATTGGATCATTCTTAAATCIGGCTGTAGCTAGAAATACTCTAGCA
TGTGTTGTAGTTCACTTACCATTTAGGTTTCTCTACATAACCTCAATAAGCTGT
TTAGTGTGCTTACTGTTACTTTAGAGCAAACCTGCAACTGTGAAAATGCTACGTGAG
CGGCACCTCTGTAATTATCATTTATAATGATGGAGCATGATCATTGCAATCAAAT
TTACAATACTGTGATTTAAAAA

SEQ ID NO 8: *Suaeda maritima* subsp. *salsa* Na^+/H^+ antiporter protein

MLSQSSFFASKMDMVSTDHASVVSMLFVALLRGCVIGHLLNEENRWMNESITALLI
GLSTGTIIILLLISGGKSSHLLVFSDELFFPTIYLPPIIIFNAGFQVKKQPFRRNPITIILFG
AVGTFLVFSFIISLGSIAIFQKMDIGSLELGDLIAIGAIFAATDSVCTLQVLNQDETPLL
YSLVFGGEVGVNDATSVLFNAIQNFDLTHDRIAFQFGGNFLYFLFASTLLGAVTGLL
SAYXVKKLYFGRHSTDREVALMLMAYLMSYLAEFLYLSGILTVFFCGIVMSHYTWHNV
TESSRVTTKHAFATLSTVAEFLIFLYVGMDALDIEKWRFVSDSPGTSVAVSSILLGHM
VGRAAFVFPFAFLMNLSSRNSEKVTNFNQQIVIWAGLMSKAVSVALAYNQFSRSGHTQ
LRGNNAIMITSTTIVLFLSTMFVGLLTKPLILFMPQPKHFTSASTVSDLGSPKSFSLPL
LEDRQDSEALDGNDDEEAYPRGTIARPTSLRMLLNAPTHTVHYWRRFDDYFMRPVFGG
RGFVEFVPGSPTEOSITNEFENIS

SEQ ID NO 9: *Zea mays* Na⁺/H⁺ antiporter NHX1

ATGGGGCTGGAGTAGTGGCGGAGCTAGTCCGCCCTGGCGTCCTTCCACCTCAGA
TCACGCCCTCGTGGTTAGCATCAATCTCTTGTGCGCTTGCTGCGCTGTATCGTCC
TGGGCCATCTTCTGAGAGAACTAGGGTGAAACGAGTCCACCGCGCTGATTGTCGGG
CTCGCAGCGGCTACCGTCATCTCTGATTAGCGGGGGGTGGTTATTCAGCTCTAGT
CTTCTCGAGGACCTCTCTCTATCTTCTGGCGGCGATCATTTCAATGAGGGT
TCCAAGTGAAGAAGAACAGTTCTTCGAAACTTCATTACTATTACACTGTTGGTGCA
GTTGGCCACCTTGTCTTCTTACTGTAAATATCCCTGGCGCTCTAGGACTAAATATCAAG
GCTTAATATCGGCCGACTTGAACGAGACTATCTTGCACTTGGGCAATTATTCCTGG
CCACAGACTCGGTTGACCTTGCAGGTGTTAACGGCAAGATGAGACACCATCTTGTAC

FIGURE 4 (continued)

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AGTCTTGTATTCGGTGAAGGCCTGGTCAACGATGCCACTTCCGTAGTGGTGTTCATGC
 ACTCCAAAACCTTGATATAACTCACATCGATCGGGAGGTGTCTTCATCTATTAGGAA
 ACTTCTTCTACCTCTTCTATCAACTGTGTGGGAGTGGCCACAGGACTTATCTCA
 GCGTTAGTGTATTTAGCTTCTCCATCTGACAGGGAGGTGGCTCT
 TATGATGCTTATGGCGTATCTCCATCTGACAGGGAGGTGGCTCT
 TCTTGACGGTATTCCTTGCGTGCATTGTTATGACCACTATACATGGCACACGTGACA
 GAGTCCAGCAGAACATCACGACTAAGCATGCCCTTGCCACGGTCACTTCTAACCGGAAAC
 CTTCCTCTTCTGTACGTGGGTATGGATGCTCGACATTGACAAGTGGAGGTCCGTGA
 GTGACACCCCAGGTAACTCTGGGCTAAAGCTCGATTGGACTCGTGATGGTT
 GGCAGGGCTGCTTCTGTATTCCTCTCCATCTGACAGGGAGGTGGCTCT
 GCACGAAAAAAATCAGCTGGAAGCAGCAGGTTGTCATTGGTGGGGCTCATGCGAG
 GCGCCGTTCTGATGGCCCTAGCGTACAAGAAGTTACCCCGCAGGGCATACTCAGGTC
 CGCGGAACCGCAGTACGATTACCAAGCAGGATTATCGTCGTGTTTCGACAATGGT
 GTTCGGCCTGCTCACGAAGCCCTTAATTAACTTGCTAATACCGCACCGTAAACCCACAT
 CGATGTTAGCGATGACTCAAGCCCAAAGTCTTGCA TAGGCGCTGCTAACCTCTCAA
 CTCGGTAGCGACTTAGAGGAGCCGACCAACATCCCGCGGGCGAGCTCCATAAGAGGCGA
 GTTCCTCACCATGACTAGGACCGTGCACCGATACTGGCGCAAGTTCGACCGACGCTTCA
 TGAGGCCCATGTCGGAGGCCGCGGTTCTGTAACCTTCTGTCGCCAGGCAAGGCCGACCGAG
 CGTAATCCGGCGGATCTTCAAGGCTTAA

SEQ ID NO 10: *Zea mays* Na⁺/H⁺ antiporter NHX1 protein

MGLGVVAELVRLGVLSSTSNDHASVVSINLFVALLCACIVLGHLEENRWVNESTALIVG
 LGTGTVILMISRCVVIHVVLVPSDIFPFYLLPPIIFNAGFQVKKQFFRNFITITLFGA
 VGTLISFTVISLGAISLRLNTGALGELGDYLAIGFISATDSVCTLQLVLSQDETDFLY
 SLVFGEGVVNDATSVVFNALQNFIDITHDAEVVFHLLGNFFYLFLSTVLGVATGLIS
 ALVIKKLYPGHGSTREVALMLMAYLSYMLAELFALSGLITVFFGCIUMSHYTWHNVT
 ESSRITKHAFATLFLAETFLVGMALDIDKWRSVSDTPGKSLAISIILMGLVMV
 GRAAFVFPPLSFLSNLAKCTEHEKISWKQOVVVIWWAGLMRGAVSMALAYKKTRAGHTQV
 RGNAIMTSTIIVVLFSTMVFGLLTKPLINLLIPHRNATSMLSDDSPSLHSPLLTSQ
 LGSDLEEPTNIPRPSSIRGEFLTMTRTVHRYWRKFDDAFMRPMFGRGFVPFVPGSPE
 RNPPDLSKA

SEQ ID NO 11: *Zea mays* Na⁺/H⁺ antiporter NHX2

ATGGGGCTTGGTGTGATGCCAGGAGACGGTCAGGCTCGGAGTCCTTAGCTGACCTCGGA
 TCATGCCAGCTTGTCAAGTAACAACCTCTTCGTAGCACTCTTGCCTGTATCGTCC
 TCGGGCATCTCTGGAGGAGAACGAATGGTTATGAGTCATTACAGCACTGCTGGTG
 GGGCTGGCACTGGGACCGTGAATTCTGATGATTAGTCGGGCGTGAATTCACGTTCT
 CGTCTTTCAGAGGGACCTGTTCTTATCTATCTGTTACCTCCGATTATCTCAATGCC
 GGTTTCAAGTAAAGAAAAGCAATTCTCCGAACCTTATAACGATTATTTGTTGGT
 GCTATTGGGACTCTGATTTCTCTGTAATAATCTCTCTGCTATGGGGTTGTTCAA
 GAAACTTGTGTTGGTCCACTCGAGCTGGGACTATCTGCAATGGTGTATTTCT
 CGGCAACAGATTCTGTTGCACCTAACAGTGCTTAACCGGATGAAACACCCCTACTC

FIGURE 4 (continued)

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TACAGTCGTATCGGCGAGGGCGTTGTTAATGATGCTACCTCAATCGTTGTGTTCAA
 CGCGCTCCAAAACCTCGACATCACCCACATCAATGCCAGGGTGGTATTTCACCTCTG
 GCAACTCTTGTACCTCTTCTATTGAGCACCGTGCTCGCGTGGCGACCGGTCTCATC
 TCCGCGCTGGTCACTAAGAAGATCTACTCGCACGCCACTCGACTGATCGGGAAAGTGGC
 CTTAATGATGCTGATGGCATATCTAAAGCTACATGCTGGCAGAGCTTTGCCCCGTCCG
 GAATCCCTACTGTGTTTCTGGCTGCATGAGCATTACAGTGGCACACGTC
 ACGGAGTCTAGCGAATTACTACGAAGCACGCCCTGGCACCCGTCTTCCCTCGCTGA
 GACTTCATATTCTCTACGTTGGATGGATGGCTAGACATTGAGAAGTGGGGTCCG
 TTTCGGACACCCCCCGAACATCGATAGCCATATCCTCAACTCATGGGGCTTGTCACTG
 CTTGGACCGCGGGCTTCGTGTCCTCGTAAGGTTCTGTCAAATCTGGCGAAGAAAGAA
 TGACACGAAAAGATCTCTGGAAAGCAGCAAGTTGTGATCTGGTGGAGGGTTGATGA
 GGGGTGCTGTCTCTATGGCCCTAGCTTATAACAAGTTTACAGAGGCCGCCATACGGAG
 GTGAGAGGTAACGAATCATGATTACTAGCACCATTCACCGTGTCTATCTCCACAGT
 GGTGTTGGTCTCTGACTAACCAACTGATGAGTCAAGGCTCTTATGCCCAACGCCATCTGA
 CCATGCTCTCGGACCGACAGCACCCGAAGTCATTGCACTCACCTTGTGACATCCAG
 CTCGGAAGCTCCATCGAAGAGCCGACCGAGATAACCACGCCCTACAAATATTGTTGCGCA
 ATTCAACAATGACGAGAACGGTGTAGGTTACTGGAGAAAATTGATGACAAATTCA
 TCGGCCCAATGTTGGCGCGAGGGCTTCGTACCCCTCGTCCCTGGTTACCCAACGGAG
 AGGAATCCCCACGATCTTCGAACGCCCTAA

SEQ ID NO 12: Zea mays Na+/H⁺ antiporter NHX2 protein

MGLGVDAETVRLGVLSSTSNDHASVSVNNFFALLCACIVLGHILLEENRMVNESITALIV
 GLGTGTVILMISRGVSIHVLFSEDLFFIYLPPPIFNAGFQVKKKQFFRNFITILLPG
 AIGTLISFVIISLGAMGLFKLVDVGPYLELGDYLAIGAIFSATDSVCTLQVLNQDETPLL
 YSLVFGEVVNDATSIVVFNALQNFIDITHNAEVVFHLLGNFLYLFLLSTVLGVATGLI
 SALVTKKIIYFCRHSITDREVALMLMAYLSYMELFALSGILTVFFGCVMSHYTWHNV
 TESSRITTKHAPATLSFLAETFIFLYVGMALDIEKWRSPSDTPGKSIASISSLMLGIVM
 LGRAAFVFPPLSFLSNLAKKNEHEKISWKQOVVIWWSGLMRGAWSMALAYNKTRAGFTE
 VRGNEIMITSTITVVLFSTVVFGLLTKPLIRLLMPHRHLMSDLSTPKSLHSPLLTSQ
 LGSSIEEPTQIPRPTNIRGEFTTMTRTVHRYWRKFDDKFMRPMFGRGFVFPVPGSPTE
 RNPHDLSPK

SEQ ID NO 13: Zea mays Na+/H⁺ antiporter NHX3

ATGTCAATAGGACTGACGGCCGAGACCGTGACTAACAAAGCTAGCCAGCGCCGAGCACCC
 CCAAGTCGTCCTAATTCTGTGTTCAATGCCCTCTGTCTGTGCTGGTGTAGGCC
 ACCTCCCTGAGGAGAACAGATGGCTCAATGAATCAATAACGCCATTCTCGTGGCGCT
 GCGACTGGGACCGTCATCCGCTCATCTCGAAACGAAAATCGAGGCCACATACTTGTGTT
 CGATGAGGAATTGTTTTCATCTATCTACTGCCGCCATTATTTTCAATGCCGGGTTTC
 AAGTAAAGAAAAGCAATTCTCCGCAACTTATAACGATTATTTTGTGTTGGTGTATT
 GGGACTCTGATTCTCTTGTAATAATCTCTCTGGTGTATGGGGTTGTCAGAAACT
 TGATGTTGGTCCACTCGAGCTGGGGACTATCTGCAATTGGTGTATTCTCGCAA
 CAGATTCTGTTGCACTTACAGGTGCTAACCGGATGAAACACCCCTACTCTACAGT

FIGURE 4 (continued)

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CTGGTATTGGTGAAGGGGTCGTGAACGACGCTACAAGTGGTGTCTGTTTAATGCAGT
 GAAAAGATCGACTCGAACACCTAACGGAGGGTGGCCCTCCAGGTTTCGGCAACT
 TCCCTATCTGTTCTAACCTAACGGTCTGGCATAGCCACTGGGCTCATTACCGCC
 TCGTCCCTAACAGAACACTCTACTTCGGCCCTCATAGTACTAACCGGTGAGTTGGCCATTAT
 GGTCTGATGGCCTACTTGTCTTCATGCTTGCTGAGTTCTCAGTCTCAGTGGTATCA
 TTACTGTTTTTCTCGGGCGTGTCTCATGCTCCATGTTACCTGGCACAAATGTTACTGAG
 TCGTCCAGAATTACCTCTGCCATGTGTTGCTATGCTAAGCTTATTGCCAACAGTT
 TTGTTCTGTCGTGAGGGGACGGACGCGCTTGACTTCAAAAGTGGAAAGACGTCCTCGT
 TATGGTATGGGAAAGTCCCTAGGGTATCCAGCGTCTCTGGGTTGGTTCTAGTCGGT
 CGGGCGGATTCTGGTCTCCCTCTCGTCTTGAGCAACCTTAGTAAGAAAACRCCCTGG
 GGAAAAAAATCACGATCAGGCAGGGTTGTAATTGGTGGGAGGACTTATGAGGGGG
 CGGTCAAGCATCGCTTGGCTCAACAAATTACAAGGGCGGTACACTCAGGTAAGA
 GGAAACGCAATCATGATCACTAGCACCACATCGTGGTTCTCTACACTCGTTT
 CGGCTCTCTCACCAAAACGGTAAATCACCTCTCATACCCCATCGAACAGCAACCTCA
 TGTGTCGACGACTCAGGCCCTAAGTCTACACAGGCCACTTTAACCTCCAACTG
 ATAAGCTCAATCGAGGAGGCCACGCAAATCCCGGGCCGACAACATAACGGGTGAGTT
 CATGACCATGACGGAAACCGTGCATCGTATTGGCGCAAGTTGATGACAAGTTCATGA
 GGCCTATGTCGGAGGGCAGGGGTTTGTCCCGTTTGTCCTCAGGGTCGCTACCGAAAGA
 AGCTCACCCGATCTATCCAAGGCATGA

SEQ ID NO 14: Zea mays Na+/H⁺ antiporter NHX3 protein

MSIGLTAETVNKLASAEHPQVVPNSVFIALLCLCLVIGHLLEENRWVNEISITAILVGA
 ATGTVILLISKGKSHILVFDEELFFIYLLPPIIFNAGFQVKKQFFRNFIITILFGAI
 GTLISFVIISLGAMGLFKLDPVPLLELDYLAIGAIFSATDSVCTLQVILNQDETPLLYS
 LVFGEVVNDATSVVLFNAVQKIDFEHLTGEVALQVFGNFLYLFSTSTVLGIAATGLITA
 FVLTGTYFGRSTTRELAIMVIMAYLSFMLAEFLSLSGIIITVFFCGVLMSEVTWHNVTE
 SSRITSRHVFPFAMLSFIAETFLFLYVGTDALDFTKWKTSISFGKSLGVSSVLLGLVVG
 RAFAVFPFLSFLNLSKKEPGEKIRQQVVIWWAGLMRGAWSIALAFNKFTRAGHTQVR
 GNAIMITSTIIVVLFSTVVFGGLITKPLINLLIPHRNATSMSSDSSPKSLHSPPLTSQI
 ISSIEEPTQIPRPTNIRGEFMTMTRTVHRYWRKFDDKFMRPMFGGRGFVFPVPGSPTER
 SSPDLSKA

SEQ ID NO 15: Zea mays Na+/H⁺ antiporter NHX4

ATGGGGTATCAGGTGTCGCGCGCAGCTGAAGCTGGCTTCCCTCAGCTGACCAAGCAAG
 CGTGGTTATCATCACGCTCTCGTGGCCCTCCCTCGCGCTTGATAGTGTGGGCCATC
 TTCTGAAGAGAACGCTGGCTAAACGAATCAATTACAGCATTGATAATCGGGCTCGGA
 ACGGGGGTTGTGATTCTATTGATCAGCCGAGGTAAAGAACAGCCGCTGCTGTGTTCTC
 CGAGGACCTCTCTCATCTATGTCGCGCCATTATTTCAATGCCGGTTCCAGG
 TGAAGAACAGTTCTCCGGAATTTCATGACAATCACACTATTGGTGTGCTGTTGGC
 ACAATGATATCCTCTTCACAATCTCTCGGGCAATAGCGACATTCAAGCAGAACATGAG
 CATTGGGACGCTAGATGTCGGGATTTCTCGTATTGGAGCTATCTTCTGCAACCG
 ATTCTGTCGACGCTGCAGGCTCCATCAGGATGAGACGCCCTTCTGACAGTCTG

FIGURE 4 (continued)

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GTATTGGGAGGGCGTAGTGAACGATGCCACAAGTGTGTACTCTTCAACGCAGTTCA
 GAAGATCCAGTTCACCCCACATAATGCATGGACAGCTCTCCAGCTGATCGGTAACTTC
 TTTACCTCTCTCCACGAGTACACTGCTCGGTATCGGGACCGGCTTGATCACAGCGTTT
 GTCCCTGAAGAAGTGTATTTGGCAGGCACTCCACTACCCGGAGCTTGCGATCATGAT
 CTTAATGGCCTACCTGTCATACATGCTGCGAGTTGTTAGTCTGTCGGGCTCCTCA
 CGGTCTTTCTGTGGCGTGTAAATGTCATGTCACATGGCATAATGTTACGGAGTCC
 AGCAGGACAACCAGCCGTACGTGTCGGACGCTCTCGTTCATATCTGAGACTTCAT
 ATTCTCTGATGTGGCATGGACGCACTCGATTTCGAGAAGTGGAAAGACCTCATCATTAA
 GCTTGGTGGGACCTGGAGTTAGTGGAGTACTCATGGGCTGGTCATGCTAGGCAGA
 GCTGCTTTGTCCTCTCTCTCTCTCCAACTCCAAAGAAACACCAAAGTGA
 GAAAATTCCTTTAGGATGCAGGTTGTTGATTGGTGGGCGGTCTAATGCGGGCGCGG
 TTTCCATGGCCTGGCGTTGAACAAATTCACTCGGAGCGGCCACACCCAGCTACATGGC
 AATGCTATCATGATAACCTCAACCATTACCGTGGTGTCTCTACGATGGTCTTGG
 CATGATTACACCCACTGATCAGGCTGCTTGGCTGCTGGACATCCGAGAGAAAT
 TATCGAACCGTGTGCAACCAAAATAGTCGGTCCCTCTCACTTAGGGGCTCCTCAC
 TAAACCAACTCACCGTGCACTACTACTGCGGAAAGTTGATGACGCACTTATGAGAC
 CGGTGTCGGGGACCTGGTTTCGTGCCATTGTTCCCGCAGGCCAACCGAGCGAAAT
 CCACCCGATCTGTCACAGCGTGA

SEQ ID NO 16: *Zea mays* Na⁺/H⁺ antiporter NHX4 protein

MGYQVVAALQKLASSADHASVVIITLFVALLCAGTCACTGHLLEENRWLNEISITALIIGLG
 TGVVVILLISRGKNSRLLVFSEDLFPIYLLPPIIFNAGFQVKKKQFFRNMTITLFGAVG
 TMISFFTISLGAIATFSRMSIGTLDVDGDFLAIGAIFSATDSVCTLQVLHQDETPFLYSL
 VFGEGVVNDATSVLFNAVQKIQFTHINAWTALQQLIGNFLYLFSTSTLLGIGTGLITAF
 VLRKLYFGRHSTTRELAIMLMAVLSYMLAEFLSLSGLLTVFFCGVLMSEVTWHNVIES
 SRTTSRHFATLSFISETFLYVGMDALDFEKWKTSLSFGGTGTVGSGVLMGLVMLGR
 AAFVFPFLSFLNLAKKHOSEKISFRMQLVIWAGLMRGAWSMALALNKFRSGHTQLHG
 NAIMITSTITVVLFSTMVFGMITKPLIRLLLPSGHPRELESEPSSPKSFHSPLLTSQOG
 SDLESSTTNIVRPSSLRGLLTKPTHTVHYYWRKFDDALMRPVFGGRGFVFPVPGSPERN
 PPDLSSKA

SEQ ID NO 17: *Hordeum vulgare* HvNHX1

AACGGAAACCTTCTCAGATAACCCGCCCGCGGAAAAGAATAGAGGAGAATCCCGACCT
 CCCCAGCCGCGGGCTGCATCTGGCCCCCCTCTCTCCCTCCCTCGCTCCCCACCCC
 GGGTTCCCGTGCATTCTTCCCTCCCCACCCGGCCCCGGCACGAAGCAGCGGG
 AGACGGGCCAGGAGGAGGAGCTCGGCTGTTCTCGTCTCCCGTCGATTCGTC
 CGGATTAGCGCCGCCGGCGTCCCGAGGGCTCCGTCGGTGTGATTGATCTGATTG
 AAAAAGCCCGCTCTTCCCCAGGGCGCGCTCGCTCGCCGGAGCTAGCTGTGTC
 GTTCGGCCGGCTCAAGGAAGAAGATAACGGCGGGATGGCGTTGAAAGTGGTGGCG
 CGCAGTTGGCGGGCTGAGCGACCGCTGGCACCTCGGACCCACGCCCTCCGGTCTCC
 ATCAACCTCTCGTCGCGCTGCTCGCCTGCACTCGTCTCGGGCACCTCTCGAGGA

FIGURE 4 (continued)

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GAACCGCTGGCTCAACGAGTCCATCACGCCCTCATCATCGGGCTGTGCACCGGCGTGG
 TGATCCTGATGACCAAGGGAGAGCTCGCACGTGCTCGTCTCAGCGAGGACCTC
 TTCTCATATACCTCCCTCCCATCATCTCAACGCCGTTCCAGGTGAAGAAGAA
 GCAGCTTCTCCGGAAATTCTGACAATCACATTATTCGGCCCTGTCGGGACCATGATT
 CATTCTCACAAATCTCTGCTGCCATTGCGATATTCAAGAGATGAACATGGGACA
 CTGGATGTATCAGAATTCTCGCAATTGAGGCCATTTTCCCGACAGAATTCTGCTG
 CACTTACAGGTTCTCAATCAGGACGAGACGCCCTTCTGTACAGCTAGTTTCCGGG
 AAGGTTGTGAACGATGCCATCATCTGCTGCTTTCAACCGCGTCCAGAACCTTGT
 CCTAACCAATCGTCACTCGTCAAGTCTGAGAACCTCTGCTACTTATT
 CGTGTCAAGCACCTTCTGGAGTATTCTGGATTGCTCAGTCAGTCATACATAATCAAGA
 AGTTATACATAGGAAGGCATTCTACTGACCGTGAGGTTGCCATTATGATGCTCATGGCC
 TACCTCTCATATATGCTAGCTGAGCTGCTGATTGAGTGGCATCCTCACCGTGTCTT
 CTGTGTATTGTGATGCTGCATTATACTTGGATAATGTCAGAGAGGCTCAAGAGTTA
 CAACAAACCATGCTTTGCAACCTTGTGCTCATTCAGTGAGACCTTCTCTTCTTAT
 GTTGGATGGATGCACTGGATATCGAGAAGTGGAAATTGCTAGTGAACGCCCTGGCAA
 ATCCATCGGAATAAGCTCAATTCTGCTAGGATTAGTCTGGTTGGAAAGAGCTGCTTGT
 TCTTCCGCTTTCACTTATCCAACCTGACAAAGAACCGAGCTCGAAAAAAATAAGC
 TGGAGGCAGAACATGTAATGGTGGCTGGGCTGATGAGGAGGCTGTGATCGC
 TCTGCTTACAATAAGTTACAAGTCTGGCCACACAGCTACACGGCAACCGATAAA
 TGATCACCAGCACCATCACTGCTGTTCTGTTAGCACTATGCTGTTGGCATATTGACA
 AAGCTCTGATCCGTTCTGCTGCCGCGTCGAGCAATGGCAGCCCTCGAGGCC
 GTCACCGAAGTCCCTGCACTCTCTCTCACAAGCATGCTAGGCTCGGACATGGAGG
 CGCCTCTCCCCATCGTCAAGGCTCCAGCCTCCGGATGCTCATCACCAAGGCCAC
 ACCATCCACTACTGCGCAAGTTCGACGACGGCTGATGCGTCTATGTCGGCG
 GCGCGGTTCTGCTCTACTCCCTGGATACCCACCGATCCAACGTAATGTTGGCAT
 GAACGTTGTGGAGAAGAGAAAAGCATTACAGCTTCAGGAGACACTCTGAACTGTTG
 TAACGAAAGAGAAGGGAGGCTACCGTACCGGAAGAAGGGAGGCTCCATTACTATT
 ATAGTGGTTGGCTGACTCGGAGGGCGAAGAAGGGCCCTCTGACGATGGTTAGATG
 AACGGTTGGCTGGCCACCAACAGGAAGATGAACCCCTAGTAACGGTGAAGAGTACCA
 TCGCTTATCGGTAACGACAAGCTGTACATTGTTGATGAGATTAACAAGCCAATTG
 TACCCATGAGATGAGATCTCTCTGGCAGGCAGGCCATTCCCTGCTCCCTTGGC
 TAGGAGTCTGGCTCATCTACAGCTGCTATTAAATCTCCCTCCCCACTTTC
 TAGTGGATTGGTGTAAAGGGTGTACTTACCAAGTTGAGTGTGAGATGAGTGTATT
 GTGGCTGGTGTACAAAGAACTCATCTCAAAGTTATCTATCTATTCTATATTGAA
 TTGAACTGAATTGTGTCTTGAACCC

SEQ ID NO 18: *Hordeum vulgare HvNHX1 protein*

MAFEVVAQLARLSDALATSDHASVVSINLFALLCACIVLGHILLENRWLNESITALI
 IGLCTGVVILMTTKGKSSHVLVFSEDLFFIYLLPPIIFNAGFQVKKKQFFRNFMTITLF
 GAVGTMISFFTISLAAIAIFSKMIGTLDVSDFLAIGAIFSATDSVCTLQVINQDETDF
 LYSLVFGEVVNDATSVVLFNALQNFDPNQIDAIVILKFLGNFCYLFVSSFLGVFSGL
 LSAYIIKKLYIGRHSTDREVALMMIIMAYLSYMLAELLDLSGILTVFFCGIVMSHYIWHN

FIGURE 4 (continued)

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VTESSRVTTHAFATLFSIAETFLFLYVGMDALDIEKWKFASDSPGKSIGISSILLGLV
 LVGRAAFVFPPLSPLSNLTKKTELEKISWRQQIVIWWAGLMRGAVSIALAYNKFTRSGBT
 QLHGNAIMITSTITVVLFSTMLPGILTKPLIRFLLPASSNGDPSEPPSKSLHSPLLTS
 MLGSDMEAPLPIVRPSSLRMLITKPTHTIHYYWRKFDDALMRPMFGRGFVSPGSPT
 DPNVIVA

SEQ ID NO 19: *Triticum aestivum* NHX2

ATGGGGTACCAAGTGGTGGCCGGCAGCTGGCCGGCTGAGCGGGCGCTGGGCACCTC
 GGACCAAGCCCTCGGTCTCCATCACCCCTCTCGCTCGCTGCTCTGCCCTGCATCG
 TCCTCGGCCACCTGCTCGAGGAGAACCGCTGGCTCAACGAGTCATCACCGCCCTCATC
 ATCGGGCTGTGCACCGGCGTGGTATCCTGATGACCACCAAGGGAAAGAGCTCGCACGT
 GCTCGTCTTCAGCAGGAGCCTCTTCATCACCTCTGCCCTCCATCATCTTCAACG
 CCGGTTTCCAGCTGAAGAACAGTCTTCAGGAAATTCATGCCAATCACACTATT
 GGTGCCGTTGGGACGATGATGCTGTTTCAACATATCTCTGCTGCCATTGCGATATT
 CAGCAGGATGAACATTGGGACACTGGATGATCAGATTTCTGCAATTGGAGCTATCT
 TTTCGGCGACAGATCTGCTGCACTCTACAGGTTCTCAATCAGGACGAGACGCCCTT
 TTGTACAGTCTAGTGTTCGGGAAAGGTGGTGAACGATGCCACATCGGTCTGCTTTT
 CAACCGCTCCAGAACATTGATCATTCAACAGATCGACGGCATCGTCATTCTTAAGTTCT
 TGGGAACTCTGCTACTTATTGCTGTCAGCACCTTCTGAGTGTATTACTGGATTG
 CTTAGTGCATACGTCTGCAAGAACATTACATAGGAAGGCATTCTACTGACCGTGAGGT
 CGCAGCTTGATGCTCATGGCTACCTCTCATATATGCTAGCTGAGCTGCTAGATTTGA
 GTGGTACTCTCACTGTTCTGGTATTGTGATGTCACATTACACTGGCACAAAC
 GTGACAGAGCTCAAGAGTACAAACAGATGCAATTGCAACCTTGTCCCTCATCGC
 TGAGACTTTCTTCCATTATGTTGGGATGAGTCAGTGATATTGAGAACGAAAT
 TTGCTAGTGCAGCCCGGCAAATCCATTGGAATAAGCTCAATTGCTCGGGTTGGTT
 CTGGTGGAAAGAGCTGCTCTCCCGCTCTCGTTCTATCCAACCTGACAAAGAA
 GACGGAGCTCGAAAAAAATAAGCTGGAGGAGCAAAATCGTAATATGGTGGCTGGCTGA
 TGAGAGGAGCTGTGTCATGCTCTGCTTACATAAGTTACAGATCTGGTACACACA
 CAGCTGCACGGCAACCGATAATGATCACCAAGCACCATCACGTCCTCTGTTAGCAC
 TATGTTGTTGGCATTTGACAAGCCCTCTGATCCGGTTCTACTGCCCGCTGAGCA
 ATGGCCGGCTCAGATCCCGCTCAGATCCCGCTCAGACTCCCTCTCCCTCACAAAGC
 CAGCTAGGCTGGACCTGGAGGCGCTCTCCCATCGTGAGGCCCTCCAGCCTCCGGAT
 GCTCATACCAAGCCGACCCACCATCCTACTACTGGCCAAGTTGACGACGCC
 TGATGCGCCGATGTTGGAGGGCGGGCTCGTCCCTACTCCCCAGGATCACCCACC
 GATCCGAACGTACTCGTGGATGAAACGTCGGAAAGAAGCAACGGAGAAGGCCATTACAGC
 TTCAGGAGACACTCTGTAACGTAACAGGAAGGAGAAGTGTCAACAGCTTCAAGAAGAA
 CGCGAAGCTCCGGATAATTATAGCGTTGGCAGACTCGGAAGGCTGAAGAACGGGC
 CCTCCGATGATGGTTCAGATGAAACGGTTGCTTGCGGACCGACAGGAAGATGAAACCTA
 GTAACGGTGTGCGAGTATCATCATCGCCTTATCGGTTACGACAAAGCCTGTACAGTTT
 TGATGTTAGATTAACAGCCATTGATCTGATGAGATCTCCGGTTGGCAGGGCGTC
 TGACCTCCTGCATCTCGCGACCGCCGGTGGCCAAGGCCGGTGGCGGCGTAC
 GCGCCGTTCCGCCGGTGCATGTTCCACAGCGAGGGCGGCTCAAGAGCTTGAGCA
 CCCCCATGAACCGCTTAAGGCGCTCCCCAGGGTGGACAGCGAGGGCGTATGTGCGGGCG

FIGURE 4 (continued)

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CCAACTTCAAGGTGGACGCCCTCACCAAGATCAACTCCATGCCCGCGTCGGCAGCGCC
 ACCAACTGGGCCGCCCTGGGACGACGCCCATCTGATCCTCGCCGCCGGCGTT
 GCTCTCCGTCGTGGCTCGTCGGCTTGGCTTATGCTTACTTGTCTTCTTCC
 TTGGCAATGTACATTCTGATCTGATCTGAGCGTGTGTGGCGTGGCGCTG
 GCACGTACGGCTGTTGCTTACGATGGAGGAATAAGACTTTGCTTCAGTCCAAAAA
 AAA

SEQ ID NO 20: *Triticum aestivum* NHX2 protein

MGYQVVAALQLARLSQLGTSHDASVVSITLFWALLCACIVLGHLLNEENRWLNEISITALI
 IGLCTGVVILMTTKGKSSHVLPSEDLFFIYLLPPIIFNAQFQVKKQFFRNFMATILF
 GAVGTMMSFFTISIAlAIFSRMNIGTLVDSDLFLAIGAIFSATDSVCTLQVLNQDETFF
 LYSLVFGEGVVNDATSVVLFLNALQNFDPNQIDAIVILKFLGNFCYLFVSSTFLGVFTGL
 LSAYVIKKRIGRSTDREVALVLMAYLSYMLAKLILDSILSGILTVFFCGIVMSHYTWHN
 VTESSRVTTKHAFATLSFIAETFLFLYVGMDALDIEKWLKFASDSPGKSIGISSILLGLV
 LVGRAFVFPLSFLSNLTKKTELEKISWRQQIVIWAGLMRGAVSIALAYNKFRSGHT
 QLHGNIAIMITSTITVLFSTMLFGILTKPLIRFLLPASSNGAASDPASPKSLHSPLLTS
 QLGSDLEAPLPIVRPSSLRMLITKPTHTIHYWRKFDDALMRPMFGGRGFVPSPGSPT
 DPNVLVE

SEQ ID NO 21: *Oryza sativa* NHX2

GGTGGCCATCTCGCTTGAAATCTGCAGGGTGAGCTGAGGGAGATCCACTGAGGTGGCGC
 GGTGAGATGGGGCTGGATTGGGAGCTCTCGTCTCAAAATCCGGGGCTGTTGGTGT
 CGGACTACGACTCGATCGTCGGCATCACATCTCGTGGCGCTGCTGCACTGCAATT
 GTGATCGGGCACCTGCTGGAAAGGGAACCGGGGGTCAATGAATCCATCACCGCGCTTGT
 CATGGGGCTGATCAGTGGAGGTGTGATTCTGCTGTCAGTGGTGGGAAGAACCTGCAAA
 TTCTTGTTCACTGAGGACCTCTTCATTTGCTTCCACCGGATCATCTTAAAT
 GCTGGTTCAAGTAAGAAAAACAAATTCTCCGCAATTATGACAATTATTTTATT
 TGGTGTGTGGGACATTGATATCTTTGTGATAATCTCTAGGTGCATGACATTGT
 TCAAAAAACTTGATGTTGGTCACTCCAGCTGGGACTATCTTGCAATGGGCTATC
 TTCTCAGCAACAGATTCTGTTTGACCTTACAGGTGCTTAACCAAGACGAAACACCCCT
 ACTCTATGCTGGTTGGTGAAGGGGTGCAATGATGCTACATCTGTTGCTCT
 TTAATGCAATTGAGACATTGATATGCTAATTGCTATTTGATAGCTTGTACTAGCGTTC
 ATAGGAAATTCTCACCTATTCTCACAGTACCCCTCTGGAGTAGTGTGCTGGGTT
 GCTTAGTGCCTATATTATAAGAAAATGTTTGCCAGACACTCAACTGACAGAGAAG
 TTGCTATCATGATCTCATGGCTACCTTCAATATGCTGTCGATGCTGCTAGATCTG
 AGTGGCATTCTCAGTGTCTCTGGGAATAGTACATTACACTTGGCATAAA
 TGTGACAGAAAGCTAGGATTACTACCAAGCACCTTGGCTACTTTATCTTCAATTG
 CTGAAATTCTCTATGTTGGGATGGATGCACTGGACATTGAAAAATGGAAA
 TTAGCTAGCAGCAGCTCTAAAAACCAATTGCTTAAAGTGCACACTATATTGGCTTGGT
 TATGGTTGGAAAGACGAGCAGATTGTTCCCTTGTCTTATCCAATCTAAGTAAA
 AAGAGACACGCCAAAGATCTCCTCAAGCAGCAAGTAATCATATGGTGGCAGGTCTC
 ATGAGAGGAGCAGTCAATAGCACTTGGCTATCACAGTCACCGCATCTGCTAC

FIGURE 4 (continued)

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TGAATTGCGAATCAATGCTATCATGATCACCCAGCACAGTCATTGTTGTTCTGTTCAAGCA
 CAATGGTTTTGGTTTTTACCAAGCCTCTCCTCAATCTCCTCATCCCACCAAGGCT
 GACATAGCAGCTGATCTCTCAAGCCAGTCATAGACCCACTTCTTGGAAAGCCTGCT
 GGGGTCTGACTTCGATGTAGGCCCTCCCTCAGAAACAACCTTCAGCTTCTCTCA
 CCATTCAAGACTCGCTCCGTTCATCGCGTGTGGCGCAAGTTTGATGATAGATTCATGCGC
 CCGATGTTGGGGGGCCGAGGCTTCGTTCTTCGTGCCCTGGTTGCCAGTGAGCAGGAG
 CATCCATGGATCTCACTGGGACTGTGACTGAGGCTGAACATAGCTGAGTTGAGGTT
 CAGAAGGTGCAAGCA

SEQ ID NO 22: *Oryza sativa* NHX2 protein

MGLDLGALVLKSGGGLLVDYDSIVAINIFVALLCSCIVIGHLLEGNRWVNESITALVMG
 LITGGVILVSGGKNSHILVPSEDLPLFIYLLPPIIFNAGFQVKKQFFRNFMIIILFGA
 VGTLSFVIIISLGAMTLFKLVDVGPLQLGDLIAIGAIFSATDSVCTLQVLMQDETPLLY
 SLVFGEGVNDATSVVLFNAIEDIDIANFDSDLVLLAFIGNFLYLFSTLGVVAGLILS
 AYIIKKLCFARSHDREVAIMILMAYLSYMLSMLLDLSGILTVFFSGIVMSHYTWHNVT
 ESSRIFTKHTFATLSFIAEFLFLFLYVGMALDIEKWKLASSSPKKPIALSATIIGLVMV
 GRAAFVFPPLSFLSNSKRETRPKISFKQQVIIWAGLMRGAWSIALAYHXPFTASGHTEL
 RINAIMITSTVIVVLFSTMVFGFFTKPELLNLIPPRPDIAIDLSSQSIDPLLGSLLGS
 DFDVGQPSPQNNLQLLTIQTRSVERVWRKEDDRFMMPGGRGFVPVPGSPVERSIH
 GSQIQLGTVTEAERS

SEQ ID NO 23: *Saccharomyces cerevisiae*

ATGCTATCCAAGGTATTGCTGAATATAGCTTCAAGGTGCTGTTAACCAACCGCCAAGAG
 AGCAGCTTGTATCTGACCGATGATGATGAACTTCTACCTTCCCGGATCTCCGGTAGCG
 ATGACCCCTATTGCGAGGTGATCTGATGATGAGACTTAAACCCCTGTTACAGAAAGAAATGTT
 TCTTCATGGGCAATTGTCATTATGTTGCTCTATTGATCTCTGCAATTGTTGCTAGTTA
 CTATTTAACTCAGAACGAATTAGGGCAGTGCAATTGTTGCTTTCTATTATG
 GTATGGTTATTGGCTTGTATAAAAGGATGTCACCCGGGATTATATTCAAGATAACGGTT
 ACTTTAACTTCATCTTACTTTAAATGTTCTATTGCGGCCATTATTTAAATAGTGG
 GTACCGAGTGAATCAAGTGAACCTTTCAATAATATGTTCTATCTTAATTTCGCCA
 TACCGGGCACCTTCATATCTGCTGTTATTGAAATCATATTGTTATCTGGACCTTT
 TTAGGACTAGAGAGTATTGACATTCAATTGCAAGATGCAATTGCTGTTGCTACATT
 ATCTGCTACCGACCCGTTACAATTCTTCATTTCATTGCGTATAAAGTGGATCCTA
 AGCTATATACCATTTGGAAATCAGTGTAAATGATGCCATTCTTATTGTTATG
 TTTGAAACCTGTCAAAATTTCATGGTCAACCTGCAACATTTCTGTCGGTTTTGAAGG
 GGCAGGCCCTTTTGATGACTTTCTCGTTCTGTTGATAGGCGTTCTTATAGGAA
 TTCTTGTGCTCTCTGTTGAAACACACTCACATAAGGCCTATCCTCAATTGAGAGT
 TGTTGATCTGTTGATTGCTTATGAACTCTTCTCCAAACGGTTGCCATATGTC
 CGGTATCGTCTCTGTTATTGCGGAATTCACTTTAAAACATTACCCCTATTATAACA
 TGTCAAGAAGATCACAGATCACCATTAAGTATATTTCACAACTATTGGCAAGAATTATCA
 GAGAATTTCATTTATCTATCTAGGTTAGAATTTTACTGAAGTAGAACTAGTCTA
 TAAGCCACTGCTAATTATGTCGGCAGCTATTCTATATGTTGCTCGTTGGTGTGCTG

FIGURE 4 (continued)

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TGTTCCCATTGTCGCAATTGTTAAGTGGATATATAGATAAAGACAATCAGATCTATG
 AGCGGCATAACCGAGAAAATATTCTGTTCCCGATGAAATACCCCTACAATTACCAAAT
 GATGACATTTGGCGAGGTTACGTGGTGTGTTGGTGTGCCCTGGCGTGGGAATT
 AAGCTGAGTATAAGTTCACTTATTGGCAACGGTCTTGTGTGTTTTAACAGTT
 ATCATTTGGGGCACTACTGCGAGGAATGTTAGAAGTTAAATTAAGACTGGTTG
 CATAACTGAAGAAGATAACATCTGATGACGAGGTTGATATAGAGGCTCCAAGGGCGATAA
 ATTTATTGAACGGTAGTTCTATTGACAGATTTGGGCCATATTCTGACAACAATTCT
 CCAGATATTCAATTGACCAATTGCGGTACAGCAGTAACAAGAATCTCCCAATAACAT
 ATCCACAACGGTAACTTTGGAGGCCTTAATGAAACTGAGAATACTAGCCCTA
 ACCCGGCAAGGTCTCTATGGATAAGCGTAATTGAGAGATAAAACTGGGAACAATCTT
 AATTCCGACTCACATGGTTCAAAATTGATGAACAGGTATTGAACGGTATTCTT
 GGACAAACGTTCTCCATCCTTACAAGATTGGCTACGCAATCACCTGCAGATTCTCTT
 CCCAAACCAACTAG

SEQ ID NO 24: *Saccharomyces cerevisiae* protein

MLSKVLLNIAFKVLLTAKRAVDPDDDELPSPDLPGSDDPIAGDPDVLDNPVTEEMF
 SSWALFIMLLLISALWSSYLYTQKRIRAVHETVLSIFYGMVIGLIIRMSPGHYIQDTV
 TPNSSYFFNVLLPPIILNSGYELNQVNFFNNMLSLILFAIPGTFISAVVIGIILYIWTF
 LGLESIDISFADAMSVGATLSATDPVTILSIFNAYKVDPKLYTIIFGESLLNDAISIVM
 FETCQKCFHGQPATPSVVFEGAGLFLMTFSVSSLLIGVLIGLVALLLKHTEIRRYPQIES
 CLILLIAYESYFFPSNGCHMSGIVSLLFCGTTLKHVAYYNMSRRSQTIKYIFQOLLARLS
 ENPFIYLGLELFTEVELVYKPLLIIVAAISICVARWCAVPLSQFVNWIYRVKTIRSM
 SGITGENISVPDEIPYNYQMMTFWAGLRGAVGVALALGIQGEYKFTLIALTVVVVLT
 LIIFGGTTAGMLEVLNKTCGCISEEDTSDEFDIEAPRAINLLNGSSIQTDLGPYSDNN
 SFDISIDQFAVSSNKNLPPNISTTCGNTFGGLNETENTSPNPARSSMDKRNLRDKLGTIF
 NSDSQWFQNFDEQVLPVFLDNVSPSLQDSATQSPADFSSQNH

SEQ ID NO 25: *Magnaporthe grisea*

ATGACTTTCGATATCGCCGGCAACCTCTGGAGCTCACCAAGGCCGCTGCCGAGGAAC
 CGAACCTGGAGGAATGGCAGTTGGCCTTGCCTCGAGTGTGTTGCGCTGATGGACTCC
 AGGACCTCGTCAGCTTCGATTACCAATCTCTTCACCTCTCCATCCACCCATCATC
 CTCTCGTCCGGTACGAGTTACATCAGGCCAATTCTTCCGGCACATCGAACATTCT
 CACGTTCGCATTTCGTCGGCACGTTCTGTCAGTAGTCATCGGTGTTATACTATGGC
 TTTACACTCGCGTACCTCTGGGGCTCACCATCGAACACTGGATCGATGCCATATCTGTT
 GGCACACTTTGTCAGCTACCGATCTGTACCATCGGCATCTCAACTCGTACAA
 GGTGGACCCGAAGCTGTATACCATCATCTTGGAGAGGCCATCTCAATGACGCTG
 CCATTGTCATCTCGAGTCGGCCAAAAGTCGGCAGGGGCTTGACCAAAGGCAGCGCT
 GCTGGCATCTCTACCTCTCTGGGTTTCTGGATTCTTGAGGGACTCTTCGGCAG
 CTTGTCATCGGGCGCTCTGGCATCCTCACCGCGCTCATGCTCAAGTACACGTACC
 TCAGGAGGTTTCCAAAGCTGGAGAGCTGCTTGTGTTATTGCTTACGCCACGTAC
 TACTTTCCCAGGCCATACACATGTCGGAATTGTCGACTGTTCTCGCGGAATCAC
 ACTCAAACACTATGCACTTCACATGTCGCGAAGAACTCAGCTACGCCAGCAAGTACA

FIGURE 4 (continued)

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TGTTTCAGGTCCCTCGCACAACTGTCTGAGAACCTTTATCTTTACCTGGGTGTTCC
 CTCTTACGGACAAGGATCTCCAGTTCAGCAGCCCTCCTCATCATTGTCAGTGTATGGC
 GGTGTGCGCAGCTCGCTGGGTGCGTATTCCCCTCTCGTGGGCCATCAACTGGTTCC
 ACAAGTACCGGGCAGAAAGACGTGGCATCAAGAACCTGCCCGAGGAGCTGCCGTACAAG
 TACCAAGGCATGCTGTTCTGGCAGGGTGCCTGGAGCGGCTGGTGTGTTGCCCTGGCCGC
 CTGTTGACGGCAAGGACCACTGGCATTCAAGGGACCGTTCTGGTTGTGGTGC
 TCACTGTCATCATATTGGTGGCACTACGGTCAACGTGCTGAAATCCTCGAGATCCG
 ACAGGAGTGAGATGAGATGATTCTGACGATGAATTGACATCGAGCCAGTTGGGG
 CTACTACAAGCGATCGGGTAACGGAATAGGTATAGCCCAGGCCGCAATGGTGTG
 TGCCCTGGACACGTCAGGTGGAGACGTCAGGACATAGATCTCCCTGAGTGGCAGGGCTGGCAG
 GACCGCAGGGCTGGAGCTCAGGACATAGATCTCCCTGAGTGGCAGGGCTGGCAG
 TCTCGTCCGTACAGGGTCAACACCGCAAGAACGCGAAAGACTGGACCTCTGGCAACC
 CGGGGGGCTGACGACTGGATGACTTGGAGGGACATTGACACGTCGGACCTGCG
 CCACCAAGCCCCCTAGGGAGACGCTGGCAAGGAGCTGGGAGCGAACATTGACACGTCGGACCTGCG
 TGGTTGCCCAGGGGGGGAGCAGGACAAGGTGCAACACAGAGACGGCTGGCTTGTCCC
 CCACGGCCGCGATCCGCCAGCTGTCAGCACCGAGGACCCAACAGCCCTGTTCAAGGAG
 CTGGACGAGGACTACATCAAACCGAAGCTACTGCTCGATGGCGGTGCCGGCGTGGAA
 CGGTGGTGGCCCTGGCGGATCGAGTTAG

SEQ ID NO 26: Magnaporthe grisea protein

MTFDIAGNLLELTRRAAEEPEPGGMMAVGLALRVFAVDGLQDLVSFDYQIFFNLLPPII
 LSSGYELHQANFFRHIGTILTFAGTFLSAVIVGVLWLYTRVPLEGLTMNWIDAISV
 GATLSATDPVIIIAIFNSYKVDPKLYTIIIFGEAIIINDAVIAVIFESAQKSARGLTKGSA
 AGISTFFWGFWIFLRLDFFGSLLPFIGALLGILTAIMLKTYLRRFKLESCLIVLIAVATY
 YFSQAIHMSGIVSLLFCGIGTLKHYAYFNMSRRTQLTTKYMFPVLAQLSENPIFYLGVS
 LFTDKDLQFOPLLIIVTVMMAVVAARVAVFPISWAINWFHKYRAERRGIKNVPEELPYK
 YQGMLFWAGLRLGAVGVALAALLTAKDHRAFKATVLVVVVLTVIIFGGTTVNVLILEIR
 TGVTDIEIDSDEFDIEAVGGYKRSRSGNGIGYSPAGRNGVVPDTRPGRRRDSNGAVGCR
 DASGWSSCHRSPLSAARPGSLVRTGSTREEAERLDLLGNPGGSTSDDFGSDIDTSDFP
 PPAPRRRSPMPPTGDEEAAGLPAGGSRTRSNTETGGLSATAAIRQLFSTEDPTALFRQ
 LDEDYIKPKLLLDGGAGGRNGGGAGGSS

SEQ ID NO 27: Prolamine promoter

CTTCTACATCGGCTTAGGTGTAAGCAACACGGACTTTATTATTATTATTATTATTATT
 ATTATTCTACAAAAAAATATAAAATAGATCAGTCCTCACCACAAAGTAGAGGCAAGTTGGTG
 AGTTATGTAAGTTCTACAAAGCTAATTAAAGTTATTGCTTAACTTATTTCTATAT
 TACAACAAAGAGTGTCAATGCAACAAATGAAACCATATGACATACTATAATTGTTT
 TATTATTGAAATTATAATTCAAGAGAATAAAATCCACATAGCCGTAAGTTCTACAT
 GTGGTGATTACCAAAATATAATAGCTTACAAAACATGACAGCTTAGTTGAAAAAAT
 TGCAATCCTTATCACATTGACACATAAAAGTGAGTGAGTCATAATAATTATTTCTT
 GCTACCCATCATGTATATGATAGCCACAAAGTTACTTTGATGATGATCAAAAGAAC
 ATTTTAGGTGCACCTAACAGAAATATCCAATATGACTCACTTAGATCATAATAGA

FIGURE 4 (continued)

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GCATCAAGTAAAACATAACACTCTAAAGCAACCGATGGGAAAGCATCTATAAAATAGACAA
GCACAATGAAAATCCTCATCATCCTCACCAATTCAAATATTAGTTGAAGCATAG
TAGTA

SEQ ID NO 28: Ubiquitin promoter without first intron

GATAATGAGCATGGCATGTCAGTTATAAAAAATTACCACTATTTTTGTACAC
TTGTTGAAGTGCAGTTATCTATCTTTATACATATATTTAACTTTACTCTACGAATA
ATATAATCTATAGTACTACATAATAATCAGTTAGAGAACTATATAAAATGAACAGT
TAGACATGCTCTAAAGGACAATTGAGTATTGGACAAACAGGACTCTACAGTTTATCTT
TTTAGTGTGCATGTGTTCTCTTTTTTGCAAATAGCTTCACCTATATAACTTCA
TCCATTATTAGTACATCCATTAGGGTTAGGGTTAATGGTTTTATAGACTAATT
TTTTAGTACATCTATTCTATTCTATTAGCCTCTAAATTAAAGAAAACCTAAACTCTAT
TTTGTATTATTATAATAATTAGATAAAATAGAATAAAATAAAGTGACTION
TTAAACAAATACCCCTTAAGAAATTAAAAAAACTAAGGAAACATTCTTGTTCGAG
TAGATAATGCCAGCCTGTTAAACGCCGTCGACGAGTCTAACGGACACCAACCAGCGAAC
CAGCACGCGTCGCGTCCGGCAAGCGAAGCAGCGCACGGCATTGTCGCTGCCCTCT
GGACCCCTCTCGAGAGTTCCGCTCCACCGTTGGACTTGCTCCGCTGCGCATCCAGAA
ATTGCGTGGCGGAGCGGAGACGTTGAGCCGACCGGCAGGGGCCCTCCCTCTCGCC
CGGCACGGCAGCTACGGGGATTCCCTTCCACACCCCTCTTCCCAACCTCGTGTGTTGG
CGCGTAATAAAATAGACACCCCTCCACACCCCTCTTCCCAACCTCGTGTGTTGG
GCGCACACACACAAACCGATCTCCCCAAATCCACCCGTCGGCACCTCCGCTTC

SEQ ID NO 29: prm3122 (sense, AttB1 site in italic)

GGGGACAAGTTGTACA~~AAAAAA~~AGCAGGCTTCACAATGGGATGGAGGTGG

SEQ ID NO 30: prm3123 (reverse, complementary, AttB2 site
in italic)

GGGGACCACTTGTACAAGAAAGCTGGGTGCACTGTTCATCTTCCCTCC

FIGURE 4 (continued)